As will be apparent to the skilled artisan, among the many advantages provided by the composite sandwich structure described herein are that the stiffness of the sandwich structure can be tailored to any particular application by adjustment of the thickness of core 12 or the thickness of layers 14 and 16. Similarly, custom orientation of layers 14 and 16 to optimize stiffness, strength or other properties in any particular direction based upon loading bearing requirements and/or conditions is possible.

Because of the continuous nature of the individual components of composite sandwich 10, core 12 and layers 14 and 16, it is possible to fabricate a wide number of shapes or structures from composite sandwich 10 when the individual elements, core 12 and layers 14 and 16 are untied or joined in the structure fabrication [[porcess]] process.

One such fabrication process is depicted in Figures 2 and 3. According to this process, the fabrication of large aluminum metal matrix (AMC) structures is possible by the continuous brazing of aluminum matrix braze-clad tape as layers 14 and 16 to an aluminum micro, multi-void using an infrared laser to melt the braze clad on the tape while applying pressure to the tape and simultaneously contacting it with core 12 on a rotating mandrel. The apparatus utilized to accomplish this

adhesive bonding, are specifically useful in the fabrication of composite sandwich

12. and may constitute layers 22 and 24 depicted in Figure 1.